

7/1/05-01384

Proposed Plan

SWMU 12: Disposal Area Near NM-37

SWMU 16: NM-37 Accumulation Area

Naval Station Norfolk
Norfolk, Virginia

July 2005

1 Introduction

This Proposed Plan identifies and provides the rationale for the Preferred Alternative for addressing potential contamination at Solid Waste Management Units (SWMUs) 12 Disposal Area Near NM-37 and 16 NM-37 Accumulation Area, at Naval Station Norfolk (NSN). The U.S. Navy (Navy) proposes no further remedial action at SWMUs 12 and 16, based on current site conditions.

This document is issued by the Navy, the lead agency for site activities, and the U.S. Environmental Protection Agency (USEPA) Region 3, in consultation with the Virginia Department of Environmental Quality (VDEQ), the support agencies. The Navy, in consultation with VDEQ and with the concurrence of USEPA, will make the final decision on the remedial approach for SWMUs 12 and 16 after reviewing and considering all information submitted during the 30-day public comment period. The Navy and USEPA, in consultation with VDEQ, may modify the Preferred Alternative or select a different remedial action based on new information or public comments. Therefore, public comment on the Preferred Alternative is invited and encouraged. Information on how to participate in this decision-making process is presented below and in Section 7.

The Navy is issuing this Proposed Plan as part of its public participation responsibilities under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Section 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This Proposed Plan summarizes information that can be found in greater detail in the July 2004 Remedial Investigation (RI) Report for SWMUs 12 & 16 and other documents contained in the Administrative Record file and Public Information Repository for NSN (see Section 7). This plan summarizes the following:

- Site characteristics (Section 3)
- Scope and role of proposed plan (Section 4)
- Summary of site risks (Section 5)
- Preferred Alternative (Section 6)
- Community participation (Section 7)

Glossary defining technical or administrative terms used in this document (identified by bold text) is also included.

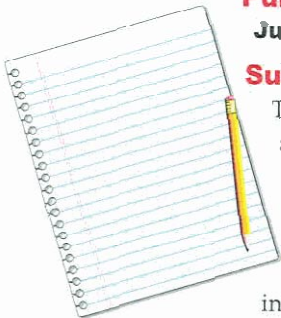
Mark Your Calendar for the Public Comment Period

Public Comment Period

July 8 - August 19, 2005

Submit Written Comments

The Navy, USEPA, and VDEQ will accept written comments on the Proposed Plan during the public comment period. To submit comments or obtain further information, please refer to the insert page.

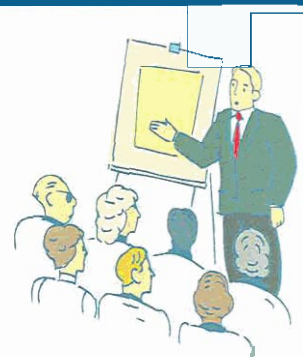


Attend the Public Meeting

Wednesday, July 27, 2005 at 6:00 pm

Place - Navy Lodge
Hampton Boulevard
Norfolk, Virginia 23455

The Navy will hold a public meeting to explain the Proposed Plan. Verbal and written comments will be accepted at this meeting.



Location of Information Repository

For more information about SWMUs 12 and 16, see the Public Repository at the following locations.

Kim Memorial Branch/ Norfolk Public Library
301 East City Hall Avenue
Norfolk, VA 23510
Phone: 757.644.7323

Naval Facilities Engineering Command - Mid-Atlantic
Attn: Ms. Tem Davis, Public Affairs Officer
1530 Gilbert Street, Suite 200
Norfolk, VA 23511-2722

2 Site Background

NSN is located in the northwest portion of the City of Norfolk, Virginia (Figure 1). Located on 4,631 acres of land, NSN is the largest naval base in the United States. NSN is bounded on the north by Willoughby Bay, on the west by the confluence of the Elizabeth and James Rivers, and on the south and east by the City of Norfolk. A portion of the NSN's eastern boundary is also formed by Masons Creek. NSN includes approximately 4,000 buildings, 20 piers, and an airfield. The western portion of NSN is a developed waterfront area containing the piers and facilities for loading, unloading, and servicing naval vessels. Land use in the surrounding area is commercial, industrial, and residential. NSN was added to the **National Priorities List (NPL)**, commonly known as "Superfund" on April 1, 1997.

Building NM 37 is an active vehicle maintenance building that services trucks, forklifts, and other military vehicles within the Naval Station Norfolk area. SWMU 12 was initially identified from a 1958 aerial photograph evaluated during a 1994 Environmental Photographic Interpretation Center (EPIC) study. The study identified SWMU 12 as a possible waste disposal area based on ground surface scarring observed in the aerial photograph. SWMU 12 is one of several **Installation Restoration Program (IRP)** sites being addressed under CERCLA at NSN.

SWMU 16, also an IRP site, was a Hazardous Waste Accumulation Area northeast of Building NM-37 that consisted of a metal container used to store fuel for mowers,

oils, and hydraulic fluids. The site was originally identified as C-54 in the **Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA)**. Although there is no history of releases, areas of stressed vegetation were observed during the Visual Site Inspection conducted as part of the RFA. SWMU 16 has since been demolished.

3 Site Characteristics

3.1 General Characteristics

SWMU 12 covers an estimated 2.5 acres and includes the 0.05 acres of SWMU 16 (Figures 2 and 3). The area is relatively flat with little relief. The ground surface in the immediate vicinity of Building NM 37 is covered with asphalt and the surrounding area is well vegetated. A small grassy field is just northwest of NM-37 and is periodically mowed. The remaining area surrounding NM-37 is densely forested primarily with pine trees reaching approximately 15 to 20 feet tall.

In June 2000, a geophysical survey found three unexplained magnetic **anomalies** not associated with any surface features. These anomalies were in the site's northern portion (along the fence line), in the wooded area between the fence line and the NM-37 parking lot, and in a grassy field northeast of NM-37. Soil borings indicate that there is little evidence of filling at this site. The only fill material encountered was at boring DS10 (just outside of the fence line north of NM-37) and consisted of 2 feet of sandy silt containing gravel, concrete, and brick fragments. Excavation in this area revealed what appeared to be a flat concrete slab buried approximately 1 foot below ground surface.

The uppermost **aquifer** at the site is unconfined with a depth to water of approximately 3 to 8.5 feet. Elevation data indicate that **groundwater** flows due west across the site towards a tidal tributary to Masons Creek, approximately 500 feet west of the site. The tributary is brackish, with salinity levels highest at locations nearest Masons Creek and the substrate mainly consisting of medium and fine sand.

3.2 Summary of Previous Investigations

Relative Risk Ranking System Data Collection Sampling and Analysis Report (1996)

In 1996, Baker Environmental, Inc. completed two Relative Risk Ranking studies to evaluate the presence of contamination and potential **exposure pathways** associated with SWMUs 12 and 16 near NM-37 at NSN. These studies included the collection of one groundwater sample and ten surface soil samples. All of the samples were analyzed for **volatile organic compounds (VOCs)**, **semi-volatile organic compounds (SVOCs)**, and metals. In addition, the Phase I samples were also analyzed for cyanide



Figure 1 - Installation Location Map

and the groundwater sample was analyzed for pesticides and **polychlorinated biphenols (PCBs)**.

Low concentrations of VOCs, SVOCs, and inorganic compounds were detected in the surface soil samples collected at SWMUs 12 and 16 during the Phase I and II Relative Risk Ranking studies. One VOC (chloroform) was detected in the groundwater sample collected at SWMU 16. Several inorganic compounds were also detected in groundwater.

Supplemental Investigation (1998)

In 1998, CH2M HILL completed the SWMU Supplemental Investigation. Four groundwater and 16 surface soil sampling locations were selected by CH2M HILL and Navy representatives based upon known storage and disposal practices, a review of the Relative Risk Ranking study analytical data, and a review of the 1994 EPIC aerial photographic study.

Remedial Investigation (2004)

A RI Report was completed by CH2M HILL in June 2004. The primary purpose of the report was to present the results of the RI sampling conducted at SWMUs 12 and 16. The RI investigation activities included a geophysical survey and two phases of investigation. The geophysical study included an electromagnetic survey and ground-penetrating radar survey to look for buried waste. Phase I of the investigation included the collection of 11 surface soil samples and six groundwater samples. Phase II of the investigation included the collection of four surface soil samples, one **upgradient** groundwater sample, and five sediment samples from Masons Creek. Sample locations for all **media** sampled during the Phase I and II Remedial Investigations are presented in Figures 2 and 3.

Based on the chemical and physical data collected from surface and subsurface soil, groundwater, and sediment at SWMUs 12 and 16, it appears that the detected constituents are not related to disposal activities at SWMU 12. This trend is observed in both the soil and the groundwater, where the concentrations of site constituents in the **downgradient** wells are at similar or higher levels than

the wells within the site boundary.

The RI concluded that the activities at SWMUs 12 and 16 did not appear to have an unacceptable impact on human health. The primary potential risks to ecological receptors at the site were limited to lower-level organisms from exposure to pesticides and **polyaromatic hydrocarbons (PAHs)** in surface soils. However, the constituents were not considered to be associated with a CERCLA release from SWMUs 12 or 16, based on a review of historical practices at these sites, but from routine historical pesticide applications. Additionally, the ecological evaluation determined that the pesticides are not migrating to downgradient water bodies and are not likely to result in adverse ecological effects. Therefore, the RI recommended the sites be considered for No Further Action under the CERCLA process.

4 Scope And Role of Proposed Plan

Based on current site conditions, no further remedial action at SWMUs 12 and 16 were proposed. Therefore, no **remedial action objectives (RAOs)** were developed and no remedial alternatives were considered.

5 Summary Of Site Risks

The RI sampling provided data for the characterization and delineation of potential contamination as well as potential human health and ecological risks. A summary of the RI's human health and ecological risk assessment is included in the following subsections.

5.1 Human Health Risk Summary

The baseline **Human Health Risk Assessment (HHRA)** was conducted to assess risks to potential current and future receptors at the site based on present-day contaminant concentrations and their distribution in the soil, groundwater, and sediment. Health risks are based on a conservative (protective) estimate of the potential **carcinogenic risk** or the potential to cause other health effects not related to cancer (**noncarcinogenic risk**).

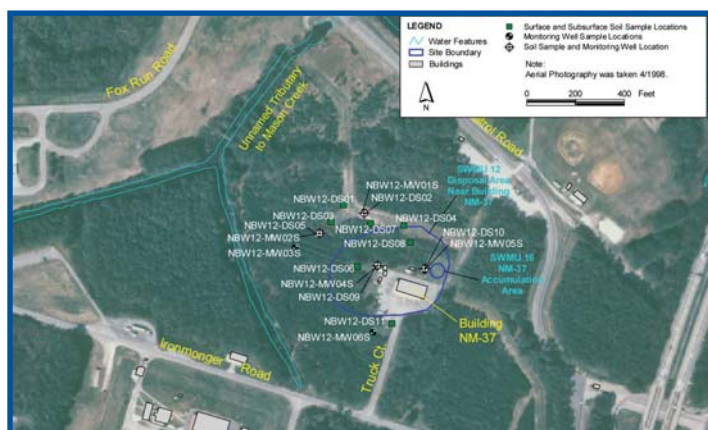


Figure 2 - Phase I Sampling Locations

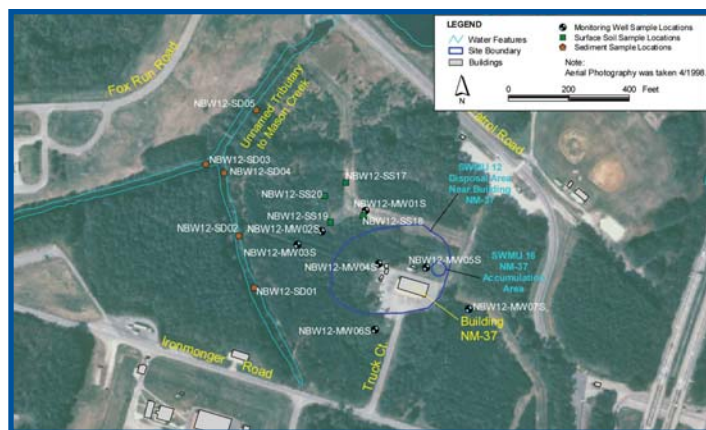


Figure 3 - Phase II Sampling Locations

The quantitative risk assessment for the **reasonable maximum exposure scenario** indicated a risk above USEPA's target levels for the hypothetical future residential child scenario and a risk at the USEPA's upper range for the hypothetical future lifetime resident. The constituents that are driving these risk levels are arsenic in the soil and arsenic, iron, and manganese in the groundwater. Arsenic was detected in the soil at concentrations similar to or below the basewide **background** level based on a comparison of site concentrations to the background UTL concentrations. Arsenic, iron, and manganese are all naturally occurring constituents that are also not considered to be associated with site activities. Therefore, the site risks are considered to be associated with background levels and the risks associated with practices at SWMUs 12 or 16 are considered to be at acceptable levels. Additionally, there were no constituents detected in the groundwater at SWMUs 12 and 16 at levels above the **MCLs**. Table 1 summarizes the human health and ecological risks identified, including results from the risk management decisions, by media for SWMUs 12 and 16.

5.2 Ecological Risk Summary

The baseline **Ecological Risk Assessment (ERA)** was conducted to assess the risks to ecological receptors at the site. A **hazard quotient (HQ)** is used to evaluate ecological risks; below an HQ of 1, adverse effects to ecological receptors are not expected. For SWMUs 12 and 16, risks were evaluated for terrestrial habitats and the aquatic habitats.

The primary potential risks to ecological receptors were limited to lower-level organisms from exposure to pesticides (4,4'-DDD, 4,4'-DDT, 4,4'-DDE, alpha-chlordane, and gamma-chlordane) and PAHs in surface soils. These potential risks were largely confined to a small area northwest of the site boundary, however, based on a review of historical practices it was determined not to be associated with a CERCLA release or activities at SWMUs 12 or 16. Although pesticides were detected in the groundwater, the available data suggest that these chemicals are not migrating to downgradient water bodies in sufficient quantities to cause adverse ecological effects.

Media	Human Health Risk	Ecological Risk
Surface Soil	Acceptable*	Acceptable*
Subsurface Soil	Acceptable*	Not Evaluated
Groundwater	Acceptable*	Acceptable
Masons Creek Sediment	Acceptable	Acceptable

* risk management decision

Table 1 - SWMU 12/16 Risk Assessment Results

What is Human Health Risk and How is it Calculated?

A human health risk assessment estimates the "baseline risk." This is an estimate of the likelihood of health problems occurring if no cleanup action were taken at a site. To estimate the baseline risk at a site, the Navy performs the following four-step process:

Step 1: Analyze Contamination

Step 2: Estimate Exposure

Step 3: Assess Potential Health Dangers

Step 4: Characterize Site Risk

In **Step 1**, the Navy looks at the concentrations of contaminants found at a site as well as past scientific studies on the effects these contaminants have had on people (or animals, when human studies are unavailable). Comparisons between site-specific concentrations and concentrations reported in past studies help the Navy to determine which contaminants are most likely to pose the greatest threat to human health.

In **Step 2**, the Navy considers the different ways that people might be exposed to the contaminants identified in Step 1, the concentrations that people might be exposed to, and the potential frequency (how often) and length of exposure. Using this information, the Navy calculates a reasonable maximum exposure (RME) scenario that portrays the highest level of human exposure that could reasonably be expected to occur.

In **Step 3**, the Navy uses the information from Step 2 combined with information on the toxicity of each chemical to assess potential health risks. The Navy considers two types of risk: (1) cancer risk, and (2) noncancer risk. The likelihood of any kind of cancer resulting from a contaminated site is generally expressed as an upper bound probability; for example, a "1 in 10,000 chance." In other words, for every 10,000 people that could be exposed, one extra cancer may occur as a result of exposure to site contaminants. An extra cancer case means that one more person could get cancer than normally would be expected to from all other causes. For non-cancer health effects, the Navy calculates a "**hazard index**." The key concept here is that a "threshold level" (measured usually as a hazard index of less than 1) exists below which noncancer health effects are no longer predicted.

In **Step 4**, the Navy determines whether site risks are great enough to cause health problems for people at or near the site. The results of the three previous steps are combined, evaluated, and summarized. The Navy adds up the potential risks from the individual contaminants and exposure pathways and calculates a total site risk.

6 Preferred Alternative

An investigation of historic operations at SWMUs 12 and 16 determined that there were no pesticide shop or operations at either SWMU. Based on the current knowledge of historical practices at SWMUs 12 and 16, the pesticides were not considered to be associated with the site activities. Therefore, the Navy recommends No Further Action as the Preferred Alternative for SWMUs 12 and 16. The estimated cost to implement this alternative is \$0.

The Navy, VDEQ, and USEPA support the Preferred Alternative. However, their final concurrence with the alternative will be provided following review of all comments received during the public comment period. The Preferred Alternative could change based on public comments.

Based on information currently available, the lead agency believes the Preferred Alternative meets the threshold criteria and provides the best balance of tradeoffs with respect to the **nine evaluation criteria**. The Navy expects the Preferred Alternative to satisfy the following statutory requirements of CERCLA §121(b): 1) be protective of human health and the environment; 2) comply with **Applicable or Relevant and Appropriate Requirements (ARARs)**; 3) be cost-effective; 4) utilize permanent solutions and alternative treatment technologies to the maximum extent practicable; and 5) satisfy the preference for treatment as a principle element (or justify not meeting the preference).

7 Community Participation

A community relations program is being conducted at NSN through the IRP. Public input is a key element in the decision-making process. Nearby residents and other interested parties are strongly encouraged to use

**During the comment period,
interested parties may
submit written comments to
the following addresses:**

Ms. Winoma Johnson, Code EV3

Naval Facilities Engineering Command – Mid-Atlantic
Building N-26, Room 3208
9742 Maryland Ave.
Norfolk, VA 23511-3095
(757) 322-4587
Fax - (757) 322-4415

Mr. Todd Richardson, Code 3HS13

USEPA (Region III)
1650 Arch Street
Philadelphia, PA 19103
(215) 814-5264
Fax - (215) 814-3051

Mr. Garwin Eng

Virginia Dept. of Environmental Quality
629 East Main Street
Richmond, VA 23219
(804) 698-4131
Fax - (804) 698-4234

the comment period to relay any questions and concerns about SWMUs 12 and 16 and the Preferred Alternative. The Navy will summarize and respond to comments in a responsiveness summary, which will become a part of the official **Record of Decision (ROD)**.

The NSN Restoration Advisory Board (RAB) was formed in 1994 to provide an information exchange among community members, the USEPA, the Commonwealth of Virginia, and the Navy. The NSN RAB meets semi-annually and meetings are open to the general public.

This Proposed Plan fulfills the public participation requirements of CERCLA Section 117(a), which specifies that the lead agency (i.e., the Navy) must publish a plan outlining any remedial alternatives evaluated for the site and identifying the Preferred Alternative. All documents referenced in this Proposed Plan are available for public review (see Section 7.3).

7.1 Public Comment Period

The public comment period for the Proposed Plan provides an opportunity to provide input regarding the decision-making process for SWMUs 12 and 16. The public comment period will be from July 8 to August 19, 2005, and a public meeting will be held on July 27, 2005 at 6:00 pm (see Page 1 of this report for details). All interested parties are encouraged to attend the meeting to learn more about SWMUs 12 and 16. The meeting will provide an additional opportunity to submit comments on the Proposed Plan to the Navy.

Comments must be postmarked no later than August 19, 2005. On the basis of comments or new information, the Navy may modify the Preferred Alternative or choose another alternative. The back page of this Proposed Plan may be used to provide comments to the Navy, although the use of this form is not required.

7.2 Record of Decision

After the public comment period, the Navy, in consultation with the USEPA and VDEQ, will determine whether the Proposed Plan should be modified on the basis of comments received. Any required modifications will be made by the Navy and reviewed by the USEPA and VDEQ. If the modifications substantially change the proposed remedy, additional public comment may be solicited. If not, then the USEPA and Navy will prepare and sign the ROD, detailing the remedial action chosen for the site.

7.3 Available Information

The Community Relations Plan for NSN, IRP fact sheets, and final technical reports concerning SWMUs 12 and 16 are available to the public at the following locations:

Kirn Memorial Branch
Norfolk Public Library
301 East City Hall Avenue
Norfolk, VA 23510
(757) 644-7373

Naval Facilities Engineering Command – Mid-Atlantic
Attention: Ms. Terri Davis, Public Affairs Officer
1530 Gilbert Street, Suite 200
Norfolk, VA 23511-2722

If individuals have any questions about NSN SWMUs 12 and 16, they may call or write to one of the contacts provided.

8 Glossary

Administrative Record: Site information is compiled in an Administrative Record and placed in the general IRP information repository for public review.

anomalies: Items detected, under the surface of the ground, by electromagnetic or other geophysical survey methods such as ground-penetrating radar. May be indicators of buried waste.

aquifer, unconfined: An underground geologic formation or structure that saturated (filled with water) and is capable of yielding water in usable quantities. An unconfined aquifer contains water that is not under pressure; i.e., the water level in a well is the same as the water table outside the well.

ARARs: Applicable or Relevant and Appropriate Requirements. These are Federal or State environmental rules and regulations that are applicable to remediation decision-making.

background concentrations: The concentration of a naturally occurring or manmade constituent, such as metal, found in groundwater, soil, sediment, and surface water in areas not impacted by spills, releases, or other site-specific activities. Background concentrations of some metals and other constituents are often at levels that may pose a risk to human health or the environment. These background-related risks should be considered (i.e.: subtracted) when calculating the risk posed by site conditions.

Carcinogenic Risk: Cancer risks are expressed as a number reflecting the increased chance that a person will develop cancer if exposed to chemicals or substances. For example, EPA's acceptable risk range for Superfund sites is 1×10^{-4} to 1×10^{-6} , meaning there is 1 additional chance in 10,000 (1×10^{-4}) to 1 additional chance in 1 million ($1 \times$

10^{-6}) that a person will develop cancer if exposed to a site that is not remediated.

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act. A Federal law, commonly referred to as the "Superfund" Program, passed in 1980 that provides for cleanup and emergency response in connection with numerous existing inactive hazardous waste disposal sites that endanger public health and safety or the environment.

downgradient: in the direction of groundwater flow; at a lower elevation

ERA: Ecological Risk Assessment. An evaluation of the risk posed to the environment if remedial activities are not performed at the site.

exposure pathways: For a contaminant to affect human health, people must be exposed to it through incidental ingestion (for example, by getting contaminated soil or water on their hands and then eating or smoking), dermal (skin) contact with contaminated soil or water, or inhalation of particles (breathing vapors or dust from bare soil containing contaminants). If there is no reasonably likely way for people or wildlife to be exposed to a contaminant, there is no complete exposure pathway.

groundwater: Subsurface water that occurs in soils and geologic formations that are fully saturated.

hazard index: A number indicative of noncarcinogenic health effects that is the ratio of the existing level of exposure to an acceptable level of exposure. A value equal to or less than one indicates that the human population is not likely to experience adverse effects.

HHRA: Human Health Risk Assessment. An evaluation of the risk that would be posed to human health if remedial activities are not implemented. HHRA is four-part process used to estimate the chance that contact with chemicals from a site will harm people now or in the future. Future risks are evaluated using hypothetical scenarios in which an adult or child could live or work on the site. This process results in numbers that show how great (or small) the health risks may be.

HQ: Hazard Quotient. HQs are used to evaluate noncarcinogenic health effects and ecological risks. A value equal to or less than one indicates that the human or ecological population are not likely to experience adverse effects.

IRP: Installation Restoration Program. A program established by the Department of Defense, in accordance with CERCLA and applicable state environmental laws, to address old waste sites on military installations. The Navy, as the lead agency, acts in partnership with USEPA and VDEQ to address environmental investigations at Naval installations through the IRP.

MCLs: maximum contaminant levels. The maximum permissible level of a contaminant in drinking water delivered to any user of a public system. MCLs are enforceable standards and are used in risk assessments as a conservative (health-protective) threshold for determining potential health risks.

media (singular, medium): Soil, groundwater, surface water, or sediments at the site.

NCP: National Oil and Hazardous Substances Pollution Contingency Plan. Provides the organizational structure and procedures for preparing for and responding to discharges of oil and releases of hazardous substances, pollutants, and contaminants.

nine evaluation criteria:

- **Overall Protection of Human Health and the Environment** - Addresses whether a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.
- **Compliance with ARARs** - Addresses whether a remedy will meet all of the ARARs of other Federal and State environmental laws and/or justifies a waiver of the requirements.
- **Long-Term Effectiveness and Permanence** - Addresses the expected residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once clean-up goals have been met.
- **Reduction of Toxicity, Mobility, and Volume Through Treatment** - Discusses the anticipated performance of the treatment technologies a remedy may employ.
- **Short-Term Effectiveness** - Considers the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period, until clean-up goals are achieved.
- **Implementability** - Evaluates the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement an option.
- **Cost** - Compares the estimated capital, operations and maintenance and present worth costs.
- **State Acceptance** - Considers the State support agency comments on the Proposed Plan.
- **Community Acceptance** - Provides the public's general response to the alternatives described in the Proposed Plan, RI, and Feasibility Study Reports. The specific responses to the public comments are addressed in the Responsiveness Summary section of the ROD.

Noncarcinogenic Risk: Noncancer hazards (or risk) are expressed as a quotient, meaning that there is a level of exposure (the reference dose) below which it is unlikely for even a sensitive population to experience adverse health effects. For example, USEPA's threshold level for Superfund sites is 1, meaning that if the exposure exceeds the threshold, there may be a concern for potential non-cancer effects.

NPL: National Priorities List. A list, developed by USEPA, of uncontrolled hazardous substance release sites in the United States that are considered priorities for long-term remedial evaluation and response.

PAH: polycyclic aromatic hydrocarbon. Typical components of asphalt, fuel, oils, and greases.

PCBs: polychlorinated biphenols. Compounds with excellent fire retardant capabilities and chemical stability that were widely used in electrical equipment, before their sale for new use was banned by law in 1979.

Proposed Plan: A document that presents and requests public input regarding the Proposed Alternative.

public comment period: The time allowed for the members of an affected community to express views and concerns regarding an action proposed to be taken by USEPA, such as a rulemaking, permit, or Superfund-remedy selection.

RAOs: Remedial Action Objectives. Objectives of remedial actions that are developed based on contaminated media, contaminants of concern, potential receptors and exposure scenarios, human health and ecological risk assessment, and attainment of regulatory cleanup levels, if any exist.

RCRA: Resource Conservation and Recovery Act. A Federal law, passed in 1976 that ensures that wastes are managed in a manner that protects human health and the environment, reduce or eliminate the amount of waste generated, and conserve energy and natural resources through waste recycling and recovery.

reasonable maximum exposure scenario: As used in risk assessment, portrays the highest level of human exposure that could reasonably be expected to occur.

receptors: Humans, animals, or plants that may be exposed to risks from contaminants related to a given site.

remedial action: A cleanup method proposed or selected to address contaminants at a site.

RFA: RCRA Facility Assessment. A RCRA document (equivalent to a CERCLA Preliminary Assessment/Site Inspection) that is typically prepared installation-wide to identify potential releases of contaminants at active waste management or waste disposal facilities.

RI: Remedial Investigation. A study of a facility that supports the selection of a remedy where hazardous substances have been disposed or released. The RI identifies the nature and extent of contamination at the facility.

ROD: Record of Decision. A legal document that describes the cleanup action or remedy selected for a site, the basis for choosing that remedy, and public comment on the considered selected remedy.

Source: An area where hazardous substances or petroleum products have been deposited, stored, released, disposed of, or placed.

SVOCs: semi-volatile organic compounds. Organic compounds (chemicals) that volatilize or evaporates slowly at standard temperature and pressure.

SWMU: Solid Waste Management Unit. An area that may include, but not limited to, any landfill, surface impoundment, land treatment unit, waste pile, underground injection well, tank, container storage area, miscellaneous unit; also, any units exempt from hazardous waste permitting requirements, such as wastewater treatment units, totally enclosed treatment units, waste recycle/reuse units, and 90-day accumulation time units; or process units or areas which may have route and/or systematic releases to the environment.

upgradient: in the opposite direction from where the groundwater is flowing; at a higher elevation.

USEPA: United States Environmental Protection Agency. The Federal agency responsible for administration and enforcement of CERCLA (and other environmental statutes and regulations), and with final approval authority for the selected remedial action.

VDEQ: Virginia Department of Environmental Quality. The Commonwealth agency responsible for administration and enforcement of environmental regulations.

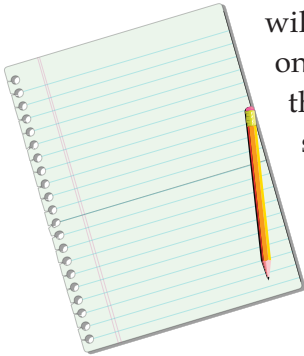
VOCs: volatile organic compounds. A general term for organic compounds capable of a high degree of vaporization or evaporation at standard temperature and pressure. These potentially toxic chemicals are used as solvents, degreasers, paint thinners and fuels.

Please print or type your comments below.

Mark Your Calendar for the Public Comment Period

Public Comment Period July 8 - August 19, 2005

Submit Written Comments



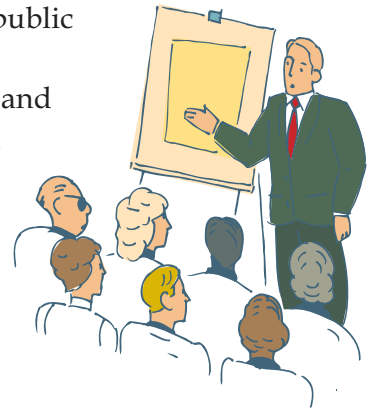
The Navy, USEPA, and VDEQ will accept written comments on the Proposed Plan during the public comment period. To submit comments or obtain further information, please refer to the insert page.

Attend the Public Meeting

**Wednesday, July 27, 2005
at 6:00 pm**

**Navy Lodge
Hampton Boulevard
Norfolk, Virginia 23455**

The Navy will hold a public meeting to explain the Proposed Plan. Verbal and written comments will be accepted at this meeting.



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Place
stamp
here

Ms. Winoma Johnson, Code EV3
Naval Facilities Engineering Command – Mid-Atlantic
Building N-26, Room 3208
9742 Maryland Ave.
Norfolk, VA 23511-3095